Message

From: Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]

Sent: 12/18/2017 9:11:55 PM

To: Jane Hoppin [jahoppin@ncsu.edu]

CC: Lindstrom, Andrew [Lindstrom.Andrew@epa.gov]; Detlef R. U. Knappe [knappe@ncsu.edu]; Hines, Erin

[Hines.Erin@epa.gov]

Subject: RE: thinking about half life and Fayetteville

Okay thanks.

Mark

From: Jane Hoppin [mailto:jahoppin@ncsu.edu]
Sent: Monday, December 18, 2017 10:02 AM
To: Strynar, Mark < Strynar.Mark@epa.gov>

Cc: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Detlef R. U. Knappe <knappe@ncsu.edu>; Hines, Erin

<Hines.Erin@epa.gov>

Subject: Re: thinking about half life and Fayetteville

Hi Mark,

I think the rest of us are set for tomorrow at 2 pm. I'm meeting with Detlef and Nadine today, so we'll get ourselves organized.

We'll fill you in.

Jane

On Mon, Dec 18, 2017 at 7:39 AM, Strynar, Mark < Strynar.Mark@epa.gov > wrote:

Conference call for me would have to be on the 18th or 22nd. I am in an all day equipment training on the 19-21st.

Mark

From: Lindstrom, Andrew

Sent: Friday, December 15, 2017 8:51 AM **To:** Jane Hoppin < <u>jahoppin@ncsu.edu</u>>

Cc: Strynar, Mark < Strynar, Mark Strynar, Mark Strynar, Mark Strynar, Mark Strynar.Mark@epa.gov; Detlef R. U. Knappe knappe@ncsu.edu; Hines, Erin

<Hines.Erin@epa.gov>

Subject: RE: thinking about half life and Fayetteville

ΑII,

If you think it would be helpful, I'd be able to join a conference call Monday or Tuesday of next week (Tuesday at 10 – 12 I'm busy though). After that I'll be gone until 1/8/18.

I've attached some recent correspondence from the ARC (American Red Cross). It looks like we have a lot of flexibility with the agreement that Erin has negotiated. Maybe we should think about how we could use this capability to supplement the ongoing R21 investigation or to strike out in an entirely new direction.

Regarding Jane's initial inquiry, I think it would be most important to try to establish half-lives of the Sun et al. compounds by conduction follow-up sampling with the existing Wilmington cohort. Even if we are only able to confirm the fact that exposures (or body burdens) have continued after "mitigation", that would be important. That said, confirming exposure in the vicinity of the plant is also extremely important.

Thank you very much,

Andy

From: Jane Hoppin [mailto:jahoppin@ncsu.edu]
Sent: Thursday, December 14, 2017 2:24 PM

To: Lindstrom, Andrew < Lindstrom. Andrew@epa.gov>

Cc: Strynar, Mark < Strynar, Mark < Strynar, Mark < Strynar, Mark < Strynar.Mark@epa.gov; Detlef R. U. Knappe < knappe@ncsu.edu; Hines, Erin

< Hines. Erin@epa.gov>

Subject: Re: thinking about half life and Fayetteville

Not sure if the Red Cross data would help answer the Bladen/Cumberland questions because most of the people who live there do not live around the Chemours plant, so on average you would not expect the donors to represent the Chemours neighbors.

I'm happy to have a call next week to discuss options.

Cheers,

Jane

On Thu, Dec 14, 2017 at 1:47 PM, Lindstrom, Andrew < <u>Lindstrom.Andrew@epa.gov</u>> wrote: Jane,

Thanks for bringing this up. We have some interesting opportunities here.

I'm very much attracted to the idea of gathering samples that would help define the half-lives of all of these compounds. This is going to be very important. But it will also be complicated by the fact that I don't think we can say that exposure really stopped at any specific time – right? GenX is still present at much lower levels in the finished water – maybe 40-50 ng/L or so? What about the other compounds?

There will also be worries about the spills at the plant, the influence of groundwater and rain events affecting river concentrations, filtration media at the water plants reaching new equilibria, and other things that make this estimate troublesome. Even so, this might be the best place to focus.

Also, we just learned today that we will be able to get Red Cross blood plasma from just about any place in the state for only about \$10 a sample. If they can get samples from Bladen and Cumberland Counties, we may want to use this path to confirm PFAS exposures in these new areas.

Maybe we could have a conference call about this sometime soon.

Thank you,

Andy

From: Jane Hoppin [mailto:jahoppin@ncsu.edu]
Sent: Thursday, December 14, 2017 12:32 PM

To: Strynar, Mark < Strynar.Mark@epa.gov>; Lindstrom, Andrew < Lindstrom.Andrew@epa.gov>; Detlef R. U. Knappe knappe@ncsu.edu>

Subject: thinking about half life and Fayetteville

Hi Mark, Andy and Detlef,

Before I raise this question to the whole team, I wanted to ask you some questions about lab capacity.

Right now, we have 310 samples to be analyzed for GenX (and other PFAS).

We originally planned to enroll 400 people.

We have IRB approval to recontact the 310 for additional samples for half life analysis. [we'd need to share the materials requesting new collection with them, but collection of additional samples is approved by our IRB]

We can enroll up to 90 more people under our current IRB. But if we go to Fayetteville to collect samples, we'd need to modify consent documents etc, so we might want to alter the sample size.

I haven't started contacting people about possibilities about another collection, until I got your input about what you thought you could handle.

One thought is to recontact some of our 310 to assess half life. We could use the questionnaire data to identify people who've lived there longest.

Another is to recruit up to 90 people around Fayetteville plant and collect blood and urine from them. It seems like their water is monitored pretty regularly, so we wouldn't have to do that. Also, I have identified ~25 serum samples from Wilmington residents before GenX was discovered and turned off. I'd like to include these in our current queue, so we can interpret whatever we find in our 310. Let me know your thoughts...there will be a lot of legwork to make any of these things happen, but I think if we can pull some of these off, it will strengthen the interpretation of our findings. Cheers, Jane Jane Hoppin, ScD Deputy Director, Center for Human Health and the Environment Associate Professor, Department of Biological Sciences CB 7633 North Carolina State University Raleigh, NC 27695 919-515-2918 (office) jahoppin@ncsu.edu http://jahoppin.wordpress.ncsu.edu/

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